

K063762

Summary

JAN - 5 2007

---

**SECTION 9**

**510(k) SUMMARY**

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR §807.92.

**I. GENERAL INFORMATION**

**1. Device Name and Classification**

Product Name: **syngo@ Circulation**  
Software Package with Extended Functionality

Classification Name: Accessory to Computed Tomography System Classification

Panel: Radiology

CFR Section: 21 CFR §892.1750

Device Class: Class II

Product Code: JAK

**2. Importer/Distributor Establishment:**

Registration Number: 2240869

Siemens Medical Solutions, Inc.  
51 Valley Stream Pkwy  
Malvern, PA 19355

**3. Manufacturing Facility:**

Siemens AG  
Wittelsbacherplatz 2  
D-80333 Muenchen, Germany

**4. Contact Person:**

Dr. Kristin Frowein  
Regulatory Submissions Specialist  
Siemensstr.1; D-91301 Forchheim  
Phone: +49 9191 18-9638  
Fax: +49 9191 18-9782

**5. Date of Preparation of Summary: December 1<sup>st</sup>, 2006**

---

## II. SAFETY AND EFFECTIVENESS INFORMATION SUPPORTING THE SUBSTANTIAL EQUIVALENCE DETERMINATION

### 6. General Safety and Effectiveness Concerns

The device labeling contains instructions for use and any necessary cautions and warnings, to provide for safe and effective use of the device.

Risk management is ensured via a hazard analysis, which is used to identify potential hazards. These potential hazards are controlled via software development, verification and validation testing. To minimize electrical, mechanical, and radiation hazards, Siemens adheres to recognized and established industry practice and standards.

### 7. Substantial Equivalence

The **syngo Circulation** software package that is addressed in this premarket notification, is substantially equivalent to the following commercially available software package:

<u>Manufacturer</u>	<u>Product</u>	<u>510(k)</u>	<u>Clearance date</u>
1. Siemens AG	syngo Circulation	K052029	08/09/2005
2. Siemens AG	syngo Multimodality Workstation (feature: Image Fusion)	K010938	06/26/2001
3. Siemens AG	LungCARE CT SW Package	K022013	07/16/2002

### 8. Device Description and Intended Use:

**syngo Circulation** is a self-contained image analysis software package for evaluating cardiac and pulmonary CTA, PET and SPECT volume data sets.

**syngo Circulation** combines commercially available digital image processing and visualization tools (MIP thin/thick, MPR thin/thick, vessel aligned MPR, CPR, VRT, AngioView, hybrid visualization), evaluation tools (myocardial and volumetric analysis of the left ventricle, coronary tree segmentation, stenosis and plaque evaluation) and reporting tools (lesion and pulmonary embolism (PE) location and characteristics) with a workflow including dedicated scanning protocols. The software package is designed to support the physician in confirming the presence or absence of physician identified coronary lesions, in evaluation of the hearts functional parameters and/or in confirming the presence or absence of physician identified filling defects, e.g. emboli, in the pulmonary arteries in addition to documentation and follow-up of any lesions.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration  
9200 Corporate Blvd.  
Rockville MD 20850

Siemens AG Medical Solutions  
% Mr. Stefan Preiss  
Responsible Third Party Official  
TÜV Product Service  
1775 Old Highway 8 NW, Ste 104  
NEW BRIGHTON MN 55112-1891

JAN - 5 2007

Re: K063762

Trade/Device Name: syngo® Circulation Software Package with Extended Functionality  
Regulation Number: 21 CFR 892.1750  
Regulation Name: Computed tomography x-ray system  
Regulatory Class: II  
Product Code: JAK  
Dated: December 11, 2006  
Received: December 20, 2006

Dear Mr. Preiss:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.



*Protecting and Promoting Public Health*

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

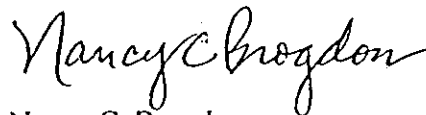
This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at one of the following numbers, based on the regulation number at the top of this letter:

21 CFR 876.xxx	(Gastroenterology/Renal/Urology)	240-276-0115
21 CFR 884.xxx	(Obstetrics/Gynecology)	240-276-0115
21 CFR 894.xxx	(Radiology)	240-276-0120
Other		240-276-0100

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Nancy C. Brogdon  
Director, Division of Reproductive,  
Abdominal, and Radiological Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

## SECTION 3

## INDICATION FOR USE

510(k) Number (if known): K063762Device Name: **syngo® Circulation**

Software Package with Extended Functionality

**Indications for Use:**

**syngo** Circulation is a self-contained image analysis software package for evaluating cardiac and pulmonary CTA, PET and SPECT volume data sets.

**syngo** Circulation combines commercially available digital image processing and visualization tools (MIP thin/thick, MPR thin/thick, vessel aligned MPR, CPR, VRT, AngioView, hybrid visualization), evaluation tools (myocardial and volumetric analysis of the left ventricle, coronary tree segmentation, stenosis and plaque evaluation) and reporting tools (lesion and pulmonary embolism (PE) location and characteristics) with a workflow including dedicated scanning protocols. The software package is designed to support the physician in confirming the presence or absence of physician identified coronary lesions, in evaluation of the hearts functional parameters and/or in confirming the presence or absence of physician identified filling defects, e.g. emboli, in the pulmonary arteries in addition to documentation and follow-up of any lesions.

Prescription Use ☒ X  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 801 Subpart C)(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE  
OF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

Nancy C. Brogdon  
(Division Sign-Off)  
Division of Reproductive, Abdominal,  
and Radiological Devices  
510(k) Number K063762